APPENDIX	<u>Z:</u>		<u> </u>		1	1		T	T		1				ı		T				1 1				<u> </u>						T		<del>                                     </del>			-1		
Study	F/S Focus? <sup>1</sup>	Design	Sample size	Sample	M/R focus? <sup>2</sup>		Independent Variables	Dependent Variables	Key Words	Emotion <sup>3</sup>	Atten./Aware. <sup>4</sup>	Conscious. <sup>5</sup>	Self-ref <sup>6</sup>	Body A,S,C <sup>7</sup>	Mental WB <sup>8</sup>	Comp & Emp <sup>9</sup>	Other		fMRI		BOLD Signal		DTI	Offier Methods DMN <sup>10</sup>			Hippocampus		rrc			Alpha Waves				Ineta waves EEG Measure used	EEG analyses	EEG Reference
Beaureg ard et al. 2008	F	CS	14	Fourteen Carmelite nuns (average years of affiliation with the Carmelite order is 18.93)	R	Mysticism Scale	Religious condition (Mystical condition vs. Control condition vs. Baseline condition)	spectral power and coherence	Mystical experience, perceptual changes, cognitive changes, hemispheric integration, EEG power and coherence	0	0	0	0	0	0	0	Hemisp heric integra tion	0 (	0 0	1	0	0 (	0	0	0	0	0 0	0	F, P, T	В	n/a	1	0	0	1   1	Power cohere ce	-	
Inzlicht et al. 2009	F	CS	50	Fifty college students of diverse religious backgrounds	R	Religious Zeal scale (McGregor et al, 2008) and single item measure of belief in God	Religious Zeal and Belief in God	Brain activity via EEG during performin g Stroop Task	Stroop task, religious conviction, anxiety, self-regulation, religious zeal, belief in God	1(anx iety)	0	0	0	0	0	0	Religio us convict ion	0	0 0	1	0	0 (	0 0	0	1	0	0 0	0	n/ a	В	n/a	0	0	0	0 0	ERN a ERP activit and amplit de		Av Ses e
Fondevil la et al. 2012	F	CS	30	Thirty Catholic Spanish, 21 Women	R	Kapogiannis Questionnaire, Likert Scale	Religiosity	N400 compone nt of ERP waveform s	MCI hypothesis, minimally counterintuitive ideas, religious sentences, cognitive model of religion	0	1 (ver bal)	0	0	0	0	0	minima lly counte rintuiti ve	0 (	0 0	1	0	0 (	0	0	0	0	0 0	0	n/ a	n/ a	n/a	0	0	0	0 C	N400 compo ent of ERP	ERP analy :N400	
et al. 2013	F			Subjects at low and high risk for depression	R	Self-reports of importance of religion or spirituality	Personal importance of religion or spirituality/ assessment time-point	EEG alpha	Spirituality and religion, personal importance of R/S, EEG alpha, affective processes	0	0	0			1(de press ion)		n/a	0											а	а						factor (alpha factor	analy	ses La ar (re no fre
Tenke et al. 2017	F	L	73	subjects at low and high risk for depression	R	Self-reports of importance of religion or spirituality	personal importance of religion or spirituality/ assessment time-point	EEG alpha	spirituality and religion, personal importance of R/S, EEG alpha, affective processes	0	0	0	0	0	1(de press ion)	0	n/a	0	0 0	1	0	0   0	0	0	0	0	0 0	0	n/ a	n/ a	n/a	1	0	0	0 0	factor (alpha factor	analy	
Thiruchs elvam et al. 2017 Kober et	a			college students (religious/nonre ligious)	R	self-reported attractiveness scale (faces); Hamilton Centrality of	amplitude self-reported	EEG alpha	religious and non religious, EEG alpha, attractiveness,	1		0				0	n/a	0											а	а	n/a Broadman		1			positiv	LPP ampl	
al. 2017	F5	CS	40	adults, 18 males 22 females,	K	Religiosity Scale, Freiburg Mindfulness inventory (FMI- 14)	frequency of prayer	gray matter volumes, neurofeed back performa nce	brain volumetry, cognitive control, mental strategy, neurofeedback, prayer, spiritual practice	U	1	0	1	1	U	0	n/a		0 0		0					0	0 1	. 0	a		area 10 (left medial orbitofronta cortex)		1	0	0   1	NF	Spect analy	
Beaureg ard et al. 2006	F	S	15	15 Carmelite nuns	R	None	Religious condition (Mystical condition vs. Control condition vs. Baseline condition)	fMRI activity	Carmelite nuns; Mystical state; Functional magnetic resonance imaging; Temporal lobes; Prefrontal cortex; Parietal cortex; Spiritual neuroscience	0	0	0	0	0	0	0	n/a	0	1 0	0	1	0	0	0	1	0	0 0	0	n/ a	L	insula	0	0	0	0 0	n/a	n/a	n/
Han et al. 2006	F	CS	28	Fourteen non- religious and fourteen Christian Chinese participants	R	Six religious items derived from Minnesota Multiphasic Personality Inventory and 50-question religious knowledge questionnaire	Religious faith (Christian vs non-religious)	fMRI activity	self-referential processing, self-denial	0	0	0	1	0	0	0	n/a	0	1 0	0	0	0 (	0 0	0	0	0	0 0	1	F	В	Ventral and dorsal media prefrontal cortex		0	0	0 0	n/a	n/a	n/
Schjoed t et al. 2008	F	CS	20	Twenty healthy young adult Christian volunteers (6 males, 14 females).	R	A self-report survey to determine belief in whether God exists and confidence in God's reciprocity.	High/low structure religious & non-religious recitals (Lords Prayer vs rhyme, personal prayer vs wishing to Santa). Also introduced a linguistic, non-semantic baseline	fMRI activity	(silent religious) prayer, caudate nucleus, Christians, habit formation, dopamine, reward system, striatum	0	0	0	0	0	0	1 (trust, autho rity)	n/a	0	1 0	0	0	0	0	0	0	0	0 0	0	n/ a	R	Dorsal striatum, caudate nucleus	0	0	0	0 0	n/a	n/a	n/

				(counting back from 100).																												
Wiech F CS	24	Twelve Catholic	R Religiosity	Religious faith	Subjects'	Religions and non-	1	0	0	0 0	1	0	n/a	0	1 0	0	0 0	0	0 0	0	0	0 0	1	n/ R	n/a	0	0	0 0	0	n/a	n/a	
et al. 2008		(8 female) and twelve atheist and agnostic (9 female) young, healthy adults	measure was used but was unspecified; The paper cites: Batson D. Religion and the individual: a social— psychological perspective. Oxford: Oxford University Press; 1993	(Catholic vs. atheist or agnostic), Presentation of a religious vs. non-religious image during pain stimulation	rating of self- perceived intensity of pain during pain stim., Subjects' rating of positive or negative affect of image, fMRI	religious image, pain experience, reappraisal, context-dependent analgesic effect					(Paii	n												a								
Ge et al. F CS 2009	32	Church-goers	R Questionnaire including attendance, prayer life, etc.	Religiousness (Religious vs. non-religious)	activity Functional connectivi	Neurocognitive modulation, trait judgments of Jesus and self, episodic and semantic memory, self- relatedness stimuli, self-referential processing, neuronal functional	0	0	0	1 0	0	0	n/a	1	1 0	0	1 0	0	0 0	0 0	0	0 1	1	F, B	mPFC, posterior parietal cortex/ precuneus	0	0	0 0	0	n/a	n/a	r
Harris et F CS al. 2009	30	15 committed Christians and fifteen nonbelievers	R None	Religiosity (Christians vs. nonbelievers)	Brain activity measured through fMRI	connectivity Christianity, cognition of belief, emotion, self- representation, cognitive conflict, judgments of true vs. false	1	0	1	0 0	0	0	n/a	0	1 0	0	0 0	0	0 0	0	0	0 1		F, B P, O, T	n/a	0	0 (	0 0	0	n/a	n/a	n
Schjoed F CS t et al. 2009	44	11 na pa nasati (FAM) experts , 11 metta experts, 22 matched controls	M None	Meditation Experience	BOLD Signal	varied religiosity, formalized vs. improvised praying, fMRI, social cognition, praying to God as intersubjective experience, temporopolar region, mPFC, temporoparietal junction,	0	0	0	0 0	0	1 (social cognit ion)	n/a	0	1 0	0	1 0	0	0 0	1	0	0 0	0	F B	Middle/Infe or Frontal Gyrus, Insula Precuneus, Thalamus		0	O 0	0	n/a	n/a	n
Han et F CS al. 2010	14	Fourteen self- identified Chinese Buddhists	R None	Religious faith	activity (modulati on of mPFC	precuneus, self; Buddhist; fMRI; medial PFC, midcingulate	0	0	0	1 0	0	0	n/a	0	1 0	0	0 0	0	0 0	) 1	0	0 0	1	F B	midcingulat left frontal/insu r cortex, pos parietal	la	0	0 0	0	n/a	n/a	n
Wu et al. 2010	32	16 Han, 16 Tibetan	R None	Ethic affiliation (Han vs. Tibetan)	activity) Brain activation during self- processing	self-processing, self- representation, VMPFC, Han and Tibetan Buddhists, ACC	0	0	0	1 0	0	1	n/a	1	1 0	0	0 0	0	0 0	) 1	0	0 0	1	F, B	vmPFC, left ACC	0	0	0 0	0	n/a	n/a	n
Schjoed F CS t et al. 2011	37	Even split between Charismatic, Pentecostal Christians and Secular Humanities Students	R None	Trait Mindfulness	Grey matter Density	Christianity, intercessory prayer, perceived charisma, experience of God's presence during prayer, interpersonal interactions	0	0	0	0 0	0	1 (trust, autho rity)	n/a	0	1 0	0	1 0	0	0 0	0 0	0	0 1	1	F B	medial and dorsolateral prefrontal cortex		0	0 0	0	n/a	n/a	n
Christen F CS son et al. 2014	24	11 Catholics and 13 atheists (all female)	R Royal Free Interview for Spiritual and Religious Beliefs; moral dilemmas leaned on harm/care and	Religiousness (Roman Catholic vs atheist)	fMRI activity	moral dilemmas, moral judgment, moral emotions, dIPFC, Atheists vs. Roman Catholics, doctrines, belief set	0	0	0	0 0	0	1 (moral )	n/a	0	1 0	0	0 0	0	0 0	1	0	0 0	1	F, B	dIPFC, STS, ACC and PCc precuneus		0 (	0 0	0	n/a	n/a	n
Johnson F CS et al. 2014	20	20 healthy subjects from different religious backgrounds	purity/sanctity  R Quest scale, Beliefs About God Assessment Form	Symbol presented (religious vs. nonreligious, positive vs. negative), religiosity of subjects	fMRI recordings	Religious symbols, perspective on religion, adaptive religious beliefs, emotional perceptions	1	1	0	0 0	0	0		0	1 0	0	0 0	0	0 1	2	2	0 0		F, P, O, T	PFC, Fusiform Gyrus, Amygdala	0	0	0 0	0	n/a	n/a	r
Svob et al. 2016	10 6	106 second and third generation family members at high or low	R Self-reports of importance of religion or spirituality,	R/S importance	DMN connectivi ty	Default mode network, Depression, Religion,	0	0	0	1 0	0	0	n/a	0	1 0	0	0 0	0	0 1	. 0	0	0 1	0	n/ n, a a	/ n/a	0	0	0 0	0	n/a	n/a	1

				risk for		frequency of			Spirituality,																										$\overline{}$	
				depression		religious attendance			Meditation, Mindfulness																											
Azari et al. 2001				Six adults self- identified as religious members of a "Free Evangelical Fundamentalist Community" and six adults self-identified as non-religious recruited from a college	R	(Relignon-Reciticond) (Recibiblication) 23 vs. silentreciticond vs. reset o	igious vsreligious), itation ditions citing ical Psalm is. Reading intly or ting sery rhyme reading a of ructions ying	Brain activity measured through PET scanning	Religious text recitation, reflexive evaluation of thought, cognitive process with immediate subjective experience	0	0	0 (	0	0	0	Cogniti ve process ing											1 F	P B	dIPFC, dorsomedial frontal and medial parietal cortex		0 (				n/a	n/
Kapogia nnis et al. 2009		CS	40	Forty healthy adult participants	R	None Relig			Different aspects of religiosity (intimate relationship with God, fear at God, doubting God's presence, religious upbringing, pragmatism.), variability in cortical volume, relationship between religiosity and cortical volume	0	0	0 0	0	0	0	Religio us experie nce, cortical volume	1 (	0 0	0	0 0	0	0	0	0 0		1	O F	В.	precuneus	0	0 (	0	0	n/a	n/a	n/
Miller et al. 2014			3	103 adults, all second or third generation offspring of depressed or nondepressed probands (first generation)	R	regarding importance of religion, religious attendance, and religious denomination religious	ituality h vs. low noderate)	thickness measured through MRI	Importance of religion, risk for depression, resilience, depression			0 (		press ion)		n/a											P	)	parietal/occi pital lobe, right mesial frontal lobe, left cuneus/prec uneus						n/a	n/
Pelletier -Baldelli et al. 2014				20 NPC Clinical Sample, 20 Control		Questionnaire for Intrinsic religing Religiosity	nsic giosity	orbitofron tal cortex (OFC)	Intrinsic religiosity, non-clinical psychosis, orbitofrontal cortex volume, depressive symptoms			0 (	(b n ch ge	orai (psyo hosis han ) es)	5	n/a													orbitofrontal cortex						n/a	n/
Cakmak set al. 2017	5	CS	20	10 swirling dervishes, 10 controls	R	dervi	vishes vs controls	measured	SWD vs controls, cortical thickness, brain regions, cortex, plasticity	0	0	1 (	) 1	0	0	n/a	1 (	0 0	0	0 0	0	0	0	0 0	0	0	0 n	n/ a	cortex	0	0 (	0	0	n/a	n/a	n/

## Footnotes

- 1 Functional or Structural focus?
- 2 Meditation or Religious focus?
- 3 (regulation and/or processing)
- 4 Attention & Awareness (regulation and/or processing)
- 5 (altered states of consciousness, mind-wandering)
- 6 Self-referential processing
- 7 Body Awareness, Bodily States/Changes
- 8 Mental Well-being (pain, resilience, stress)
- 9 Compassion and Empathy
- 10 Default Mode Network
- 11 Gray Matter/Cortex/Cortical

<u>Category</u>	Rating/Meaning
Functional/Structural Focus?	Functional= F; Structural= S; Both= B; Neither = n/a
Design	Longitudinal= L; Cross-Sectional=CS;
Sample	E.g., Adults, Children, Ethinic Group
Sample size	N = x
Meditation or Religious focus?	Meditation= M; Religious= R;
Lobe	N/A=0; Frontal=1; Parietal=2; Occipital=3; Temporal=4
Hemisphere	Left=L; Right=R; Both=B; or N/A
Numerical Coding	Yes = 1, No = 0